

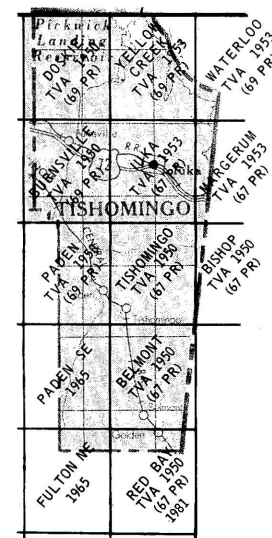
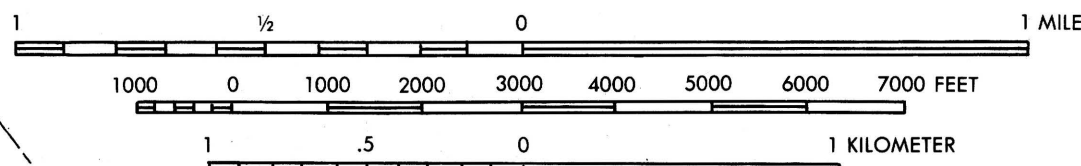
MISSISSIPPI BUREAU OF GEOLOGY  
OPEN FILE REPORT 8

**GEOLOGIC MAP  
OF  
MISSISSIPPI PORTIONS OF THE YELLOW CREEK  
(MISSISSIPPI-ALABAMA-TENNESSEE)  
AND WATERLOO  
(MISSISSIPPI-ALABAMA)  
QUADRANGLES**

Geology by Robert K. Merrill

1988

SCALE 1:24,000



Quadrangle map locations.  
Mapped portions are shaded.

**DESCRIPTION OF MAP UNITS**

Qal

**ALLUVIUM**

Sand, medium- to brownish-gray, very fine- to very coarse-grained, subangular to subrounded quartz, silty, clayey; commonly contains organic matter; chert and quartzite pebbles common at base.

Qtl

**LOW ELEVATION TERRACE DEPOSITS**

Sand, light-gray to dark reddish-brown, very fine- to very coarse-grained, subangular to subrounded quartz, silty, clayey; lower portions contain layers and lenses of flattened quartzite and quartz pebbles interspersed with rounded chert pebbles; iron staining common on pebbles. Distributed adjacent to present stream courses, at and above flood plain elevation.

Qtt

**TENNESSEE RIVER TERRACE DEPOSITS**

Gravel, moderate reddish- to dark yellowish-brown, very well rounded chert and smooth, flattened quartzite pebbles; iron staining common on outer surfaces; beds and lenses of sand, silt, and clay occur frequently in upper portions. Irregular bedding, occasional cross-bedding; ironstone cementation common. Mainly occur at elevations above 600 feet. Erosional contact at base.

Kc

**COFFEE FORMATION**

Sand, light- to medium-gray, very fine- to medium-grained, subangular quartz, glauconitic, micaceous; frequently interbedded with silt, light- to medium-gray, clayey; thinly bedded with occasional intervals of irregular- to massive-bedded sand; occasional lenses and stringers of small chert gravel at base. Frequent thin ironstone beds; weathers to shades of reddish-brown. Unconformity at base.

Ket

**EUTAW FORMATION  
TOMBIGBEE SAND MEMBER**

Sand, medium light- to olive-gray, very fine- to medium-grained, subangular to subrounded quartz, well sorted, massive-bedded, glauconitic, micaceous, silty, clayey; weathers to various shades of reddish-brown. Frequent occurrence of ferruginous cemented sand molds of *Callianassa* sp. burrows.

Ke

**LOWER EUTAW MEMBER**

Sand, medium- to olive-gray, fine- to medium-grained, subangular to subrounded quartz, glauconitic, micaceous, horizontal- and cross-bedded; commonly thinly interbedded and interlaminated with clay, medium-gray, locally carbonaceous; isolated occurrences of petrified wood in lower portions. Weathers to various shades of reddish-brown. Contains chert gravel in lowermost portions. Unconformity at base.

Kt

**TUSCALOOSA GROUP (UNDIFFERENTIATED)**

Gravel, chert white to dark-gray, very well rounded; frequent silt and clay matrix; sand, light- to moderate reddish-brown, very fine- to very coarse-grained, subrounded to angular quartz and chert grains, poorly sorted, with frequent gravel lenses and stringers; clay, white- to medium-gray with occasional occurrences of carbonaceous dark-gray clays; zones of multi-colored chert gravel; frequent well-cemented chert pebble conglomeratic zones. Laterally traceable silt and clay intervals occur most frequently in uppermost and lowermost intervals. Unconformity at base.

Mfp

**FORT PAYNE FORMATION  
UPPER PORTION**

Chert, very light- to dark-gray, thin-bedded; locally weathered to clay, silty, white to very light-gray, and tripolitic silt, white to very light-gray; locally stained shades of brown.

Mdc

**LOWER PORTION**

Limestone, medium- to dark bluish-gray, finely crystalline, wackestone, and mudstone, thin- to massive-bedded, occasional shaly texture when weathered; occasionally glauconitic. Isolated occurrences of very thin interval of grayish-green shale (Maury Shale) at base. Contains isolated lenses of chert.

Dr

**CHATTANOOGA FORMATION**

Shale, brownish-gray to grayish-black, carbonaceous, silty, sandy, calcareous, very thinly bedded and laminated; isolated occurrences of thin sandstone laminae. Unconformity at base.

Dr

**ROSS FORMATION**

Limestone, light- to medium bluish-gray, light brownish-gray when weathered; contains intervals of grainstone, mudstone, and shale; sparsely glauconitic; thin- to massive-bedded. Uppermost exposed portions consist of chert, light brownish-gray, granular, fractured, fossiliferous, and thin-bedded.

Base map prepared from the Yellow Creek (Mississippi-Alabama-Tennessee) and Waterloo (Mississippi-Alabama) Quadrangles, Tennessee Valley Authority-United States Geological Survey, 1953, photorevised 1969 and 1970. 1927 North American datum.